That which is claimed is:

1. A method of stimulating the growth of lung alveolar surface in a lung in need thereof, comprising:

providing progenitor or stem cells capable of regenerating lung alveolar surface; and

administering said progenitor or stem cells to said lung in an amount sufficient to stimulate the growth of lung alveolar surface therein.

2. A method according to claim 1, wherein said lung is *in vivo* in a subject in need of said treatment.

3. A method according to claim 1, wherein said lung is *ex vivo*, and wherein said administering step is followed by the step of:

transplanting said lung into a recipient in need thereof.

4. A method according to claim 1, wherein said subject is a mammalian subject.

5. A method according to claim 1, wherein said subject is a human subject.

6. A method according to claim 1, wherein said step or progenitor cells are from the same species as said subject.

7. A method according to claim 1, wherein said progenitor cells are autologous cells.

8. A method according to claim 1, wherein said administering step is carried out by intravenous injection, intra-arterial injection, or intra-bronchial administration.

9. A method according to claim 1, wherein said stem or progenitor cells are lung cells.

10. A method according to claim 1, wherein said stem or progenitor cells are bone marrow cells.

11. A method according to claim 1, wherein said stem or progenitor cells are embryonic stem cells.

12. A method according to claim 11, wherein said embryonic stem cells contain a cell nucleus that is autologous to said subject.